MANTID Architecture Overview

Overview

- Introduce where mantid fits in within facility ecosystem
- Describe general architecture of system
- Overview of where mantid runs

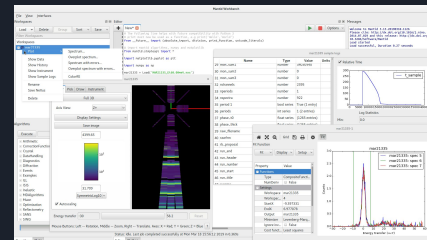# **M**anipulation and **AN**alysis **T**oolkit for **I**nstrument **D**ata

- A high performance computation framework for scientific data.
- Manipulate and analyse Neutron and Muon data.
  - Neutron Scattering
    - Diffraction, spectroscopy, small angle, reflectometry
  - Muon Spectroscopy
  - Could be applied to other techniques
- Open Source
- Advanced graphing and visualisation UI.
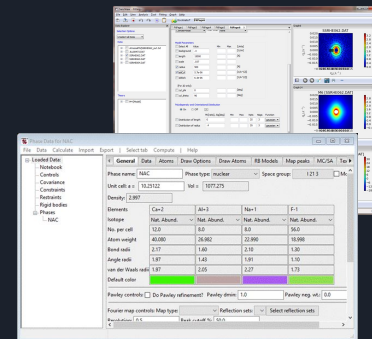- Multiple Platforms

Facility Ecosystem

Data Collection

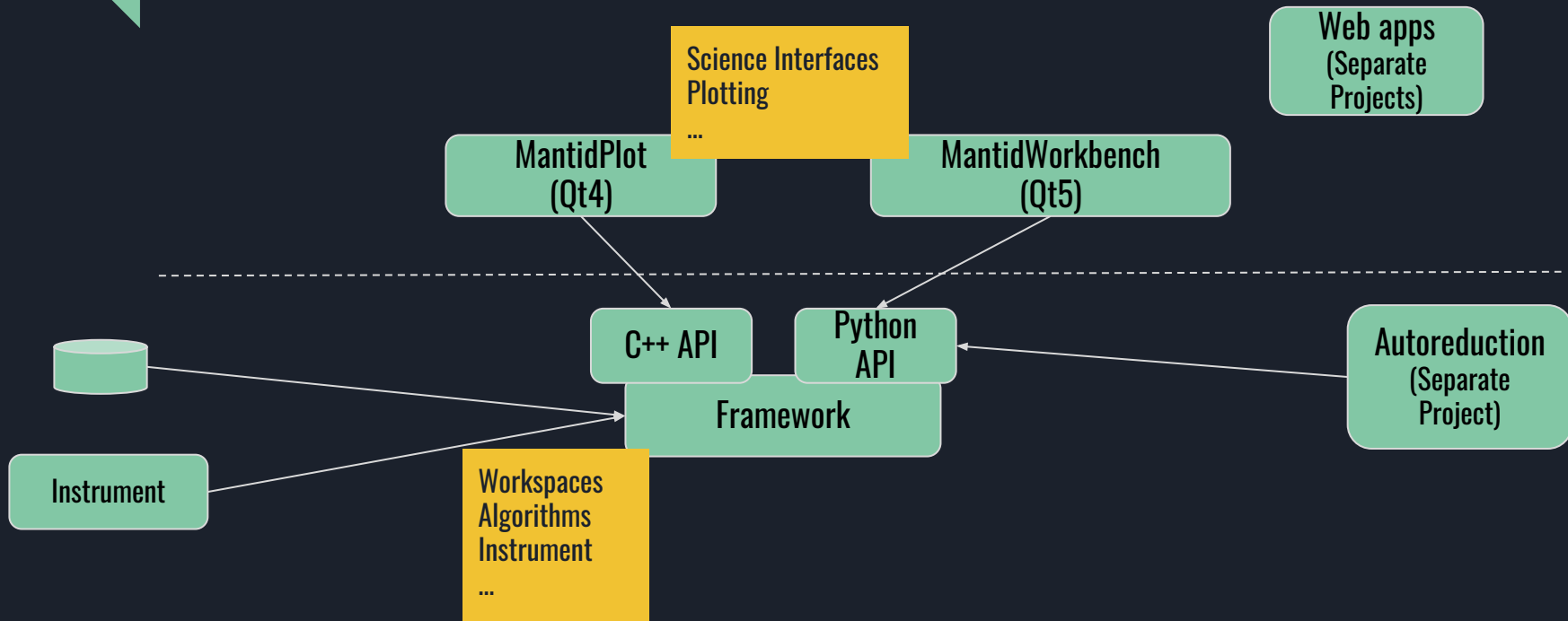**NeXus/RAW File**

NX

Mantid

Other analysis programs...

Live Data

Mantid Architecture

Environments (where is mantid running)

- Official support for:
  - Windows
  - RedHat 7/CentOS 7
  - Ubuntu 16.04/18.04
  - MacOS 10.10+
- Installable to any users machines
- Used by Autoreduction service for automatic processing of data as it is collected
- Installed in new ISIS Data Analysis as a Service (IDAaaS) platform
- Installed in legacy ISISCompute platform

Location Data

Summary

- MANTID is designed to be flexible and integrate with other software/systems
- MANTID is mission critical software for many facilities